

Each tooth has a form and size peculiar to itself, and different from the rest, but corresponds of course with its fellow on the opposite side. The same may be observed, but in a less degree, in the teeth of the *Megatherium* itself; hence, it is obviously hazardous to found a generic distinction upon a single tooth, unless, as in the case of the *Glyptodon*,\* the modification of form happens to be extremely well marked. The whole series of teeth, or their sockets, at least of one of the jaws, should be known for the purpose of making a satisfactory comparison with the previously established Edentate genera.

The first molar in the present jaw is the smallest and simplest of the series: its transverse section is ellipsoid, or subovate, narrowest in front, and somewhat more convex on the outer than on the inner side: the long diameter of the ellipse is nine lines, the short or transverse diameter six lines: the length of the tooth may be about three inches, but I have not deemed it necessary to fracture the alveolus in order to ascertain precisely this point.

The second tooth presents in transverse section a more irregular and wider oval figure than the first: the line of the outer side is convex, but that of the inner side slightly concave, in consequence of the tooth being traversed longitudinally by a broad and shallow channel or impression; the longitudinal diameter of the transverse section is one inch; the transverse diameter at the widest part nine lines. There is a slight difference in the size of this tooth on the two sides of the jaw, the right one, from which the above dimensions are taken, being the largest.

The transverse section of the third tooth has a trapezoidal or rhomboidal form; the angles are rounded off; the posterior one is most produced; the anterior and posterior surfaces are flattened, the latter slightly concave in the middle; the external and internal sides are concave in the middle, especially the inner side, where the concavity approaches to the form of an entering notch. The longest diameter of the transverse section of this tooth is thirteen lines, the shortest seven lines and a half: in the tooth on the right side the external surface is nearly flat; this slight difference is not indicated in the figure (Pl. XVIII.)

The last molar, which is generally the most characteristic in the fossil *Bruta*, presents in an exaggerated degree the peculiarities of the preceding tooth; the longitudinal channels on both the outer and inner surfaces encroach so far upon the substance of the tooth, that the central coarse ivory substance is as it were squeezed out of the interspace, and the elevated ridge of the dense ivory describes an hour-glass figure upon the triturating surface, the connecting isthmus being but half the breadth of the rest of the tract; the external cementum preserves nearly an equal thickness throughout. Of the two lobes into which this tooth is

\* See Proceedings of the Geological Society, March 1839, and Parish's Buenos Ayres, p. 178, *l*, Pl. 1, fig. 2 and 3.

divided by the transverse constriction, the anterior is the largest; their proportions and oblique position are pretty accurately given in the figure. The longitudinal diameter of the transverse section of this tooth is one inch, seven lines, its greatest lateral or transverse diameter is ten lines, its least diameter at the constricted part is three lines, the length of the entire tooth is four inches. Judging from the form of the jaw, the length of the other teeth decreases in a regular ratio to the anterior one. The posterior tooth is slightly curved, as shown in fig. 2, Pl. XIX., with the concavity directed towards the outer side of the jaw.

The general form of the horizontal ramus of the jaw, is so well illustrated in the figures Pl. XVIII. and XIX., that the description may be brief.

The symphysis is completely ankylosed, about four inches in length, and extended forward to the extremity of the jaw at a very slight angle with the inferior border of the ramus: it is of great breadth, smooth and gently concave internally, and suggests the idea of its adaptation for the support and gliding movements forwards and backwards of the free extremity of a long and well-developed tongue.

The exterior surface of the symphysis is characterized by the presence of two oval mammilloid processes, situated on each side of the middle-line, and about half way between the anterior and posterior extremes of the symphysis. A front view of these processes, of the natural size, is given in fig. 4, Pl. XIX.: a side view of the one on the right side represented in the reduced figure.

Nearly four inches behind the anterior extremity of the above process is the large anterior opening of the dental canal: it is five lines in diameter, situated about one-third of the depth of the ramus of the jaw from the upper margin. The magnitude of this foramen, which gives passage to the nerve and artery of the lower lip, indicates that this part was of large size; and the two symphyseal processes, which probably were subservient to the attachment of large retractor muscles, denote the free and extensive motions of such a lip, as we have presumed to have existed from the size of the foramina destined for the transmission of its nervous and nutrient organs.

The angle of the jaw is produced backwards, and ends in an obtuse point, slightly bent upwards; a foramen, one-third less than the anterior one, leads from near the commencement of the dental canal, to the outer surface of the jaw, a little below and behind the last molar tooth; this foramen presents the same size and relative position on both sides of the jaw. I find no indication of a corresponding foramen, or of symphyseal processes in the figures or descriptions of the lower jaw of the *Megatherium*, nor in the lower jaw of the Sloths, Ant-eaters, Armadillos, or Manises, which I have had the opportunity of examining with a view to this comparison.